

I/WE CLAIM:

1. A method of providing configuration information for a bridged virtual local area network (VLAN) within a communication network, comprising the steps of:
 - a. presenting a graphical user interface (GUI);
 - b. receiving an identification of a node and of a physical port through the GUI;
 - c. receiving a validated VLAN configuration through the GUI; and
 - d. transmitting the validated VLAN configuration to the node.
2. The method of claim 1 wherein the step of receiving a validated VLAN configuration comprises receiving an identification of at least one virtual port belonging to a member set of the VLAN.
3. The method of claim 2 wherein the step of receiving a validated VLAN configuration further comprises the steps of:
 - a. receiving an identification of zero or more virtual ports belonging to a forbidden set of the VLAN;
 - b. receiving an identification of zero or more virtual ports belonging to an untagged set of the VLAN; and
 - c. ensuring that the member set and the forbidden set have no virtual ports in common.
4. The method of claim 3 further comprising the step of receiving from the identified node existing configuration information for existing VLANs on the physical port of the node, and wherein the step of receiving a validated VLAN configuration further comprises the steps of:
 - a. receiving a VLAN identification (ID) of the bridged VLAN; and

- b. ensuring the VLAN ID is not already being used by an existing VLAN.
- 5. The method of claim 4 further comprising the steps of:
 - a. determining from the existing configuration information a number of VLANs currently configured on the physical port; and
 - b. ensuring that configuration of the bridged VLAN on the physical port would not violate a maximum limit of VLANs on the physical port.
- 6. The method of claim 1 comprising the further step of storing the valid configuration information at a network management system.
- 7. The method of claim 1 wherein the node is an Asynchronous Transfer Mode node.
- 8. The method of claim 1 wherein the bridged VLAN is in conformance with the 802.1q VLAN standard.
- 9. A processor for providing configuration information for a bridged virtual local area network (VLAN) within a communication network, comprising:
 - a. instructions for presenting a graphical user interface (GUI);
 - b. instructions for receiving an identification of a node and of a physical port through the GUI;
 - c. instructions for receiving a validated VLAN configuration through the GUI; and
 - d. instructions for transmitting the validated VLAN configuration to the node.

10. The processor of claim 9 wherein the instructions for receiving a validated VLAN configuration comprise instructions for receiving an identification of at least one virtual port belonging to a member set of the VLAN.
11. The processor of claim 10 wherein the instructions for receiving a validated VLAN configuration further comprise:
 - a. instructions for receiving an identification of zero or more virtual ports belonging to a forbidden set of the VLAN;
 - b. instructions for receiving an identification of zero or more virtual ports belonging to an untagged set of the VLAN; and
 - c. instructions for ensuring that the member set and the forbidden set have no virtual ports in common.
12. The processor of claim 11 further comprising instructions for receiving from the identified node existing configuration information for existing VLANs on the physical port of the node, and wherein the instructions for receiving a validated VLAN configuration further comprise:
 - a. instructions for receiving a VLAN identification (ID) of the bridged VLAN; and
 - b. instructions for ensuring the VLAN ID is not already being used by an existing VLAN.
13. The processor of claim 12 further comprising:
 - a. instructions for determining from the existing configuration information a number of VLANs currently configured on the physical port; and
 - b. instructions for ensuring that configuration of the bridged VLAN on the physical port would not violate a maximum limit of VLANs on the physical port.

14. The processor of claim 9 further comprising instructions for storing the valid configuration information at a network management system.
15. The processor of claim 9 wherein the node is an Asynchronous Transfer Mode node.
16. The processor of claim 9 wherein the bridged VLAN is in conformance with the 802.1q VLAN standard.